

## The Subtleties of Touch

by Arlene Green

Touching and being touched is an instinctual need of both animals and humans. Touch is the most important of all our senses, yet for humans the most neglected. We can survive without sight, hearing, taste and our sense of smell, but we cannot survive and live with any degree of comfort and mental health when we are not able to feel.

What is so special about this sense of touch that makes it an indispensable part of our existence? Why is it that most of our sense receptors throughout our body are embedded in our skin? A map of the brain will show that your hands occupy the largest area in your cortex, then next the face and mouth. About one third of our five million sensory receptors in our skin are in our hands, the most sensitive receptors being concentrated in our palms and fingertips the next most sensitive area being the lips and tongue. Nature's intention in giving us touch sensitivity is to provide us a means of sorting out the millions of stimuli we are constantly receiving. Above all else, the tactile discernment we possess helps to protect us by alerting us to danger through temperature, vibration and pressure sensations. Aside from the survival function, touch provides a more subtle form of communication.

### The Language of Touch

The skin is the largest sensory organ of the body and the sense most closely associated with it is the sense of touch. It is the first sense to become functional in the developing fetus. The skin has been referred to as the furthest extension of the nervous system. This is because the skin is formed from the same embryonic tissue as the brain and the nervous system. Ashley Montagu in his book, *Touching: The Human Significance of the Skin*, writes: "The nervous system is then, a buried part of the skin, or alternatively, the skin may be regarded as an exposed portion of the nervous system." We can think of the skin, then, as the external nervous system. It is the medium by which the external world is perceived.

For the infant, the skin, lips and tongue are the primary means of relating to his environment. At birth, touch is the infant's most well developed sense. The experiences the infant has in his contact with his mother's body, constitute his primary and basic means of communication, his first language. It is through the lips and generalized body contact that the infant comes to know reality. That's why when he is able to, he puts things to his lips to judge them, even after he has developed other means of perception and judgement. The sense of comfort and security the infant experiences through the quality, quantity and consistency of touch from the mother has been shown to have a powerful affect on both the physical and psychological development of the infant.

### Research on the Importance of Touch

#### Early Childhood Growth and Development

The physical, mental and emotional development of the newborn requires frequent and close contact with the mother. In the womb the unborn child usually experienced a nine month period of heart beat vibrations, rocking, cuddling and a closeness of unequalled security. It is no wonder, having experienced this sense of security in the womb, that we would want to continue to seek this feeling as a newborn and throughout life. For the newborn to thrive it must be fed touch as much as food.

Numerous studies have shown that for infants their need for tactile stimulation and close body contact with the mother is greatest right after birth. For the Caesarean born, who experience less prebirth cutaneous stimulation, not having gone through the labor contractions and birth canal, and who generally experience less contact with the mother at birth and during the first week of life, studies show a higher incidence of developmental disadvantages. Doctors have noted that Caesarean babies tend to experience respiratory difficulties, greater lethargy and

less responsiveness to stimulation than normally (vaginally) delivered babies. Also Caesatean babies have a higher likelihood of gastrointestinal and genitourinary problems. Biochemical differences in the Caesarean born find them to have higher acidosis, lower serum proteins, lower serum calcium and higher potassium levels. Caesarean born children have also been shown to be more likely to be fearful of school, anxious and have other personality difficulties.

During the nineteenth century, more than half the infants in their first year of life regularly died from a disease called "marasmus," a Greek word meaning "wasting away" (without any apparent reason). As late as the 1920's, the death rate for infants under one year of age in various foundling institutions throughout the U.S. was nearly 100%. In 1915, Dr. Henry Chapin, a distinguished N.Y. pediatrician reported to the American Pediatric Society that for infants under 2 years of age, the death rate in 9 out of 10 foundling institutions was 100%. It was found that the primary cause of this high death rate was not due to sanitary conditions or medical procedures but in large part to the philosophy of caring for the child. Institutions and parents followed the dogmatic teachings of Luther Emmet Holt Sr., a professor of Pediatrics - the Dr. Spock of his era. Mr. Holt was responsible for replacing the rocking cradle with the stationary crib and advising parents not to hold, fondle or cuddle their babies for fear of spoiling them. Feeding was by schedule and contact kept to a minimum. It is no wonder that in this austere environment the infants wasted away.

Another doctor, Dr. Rene Spitz, found a high death rate from marasmus while working at a hospital for abandoned babies and babies whose mothers were in prison. Even though the infants were well fed and kept in highly sanitary conditions they still had a high death rate. While vacationing in Mexico, Dr. Spitz observed an orphanage where conditions were less sanitary but the babies were happier, more robust and alert, and cried less. What he observed was that women from the village came in daily to hold, rock and fondle the babies. After observing thousands of babies over the years he concluded that "touched babies thrived, while those who were left

alone in bassinets tended to become ill, their cells dying of touch starvation."

Similar findings on the importance of the effects of touch on premature babies was found by researchers at the University of South Carolina Medical School. It was found that "preemies who received four fifteen minute periods of stimulation each day gained weight and grew faster than unstimulated preemies, and with fewer feedings." A nursing student at Emory University showed that preemies who were "held and stroked showed more signs of relaxation after feedings, had decrease in post feeding pulse rate, respiratory rate, muscle tension rate, neck hypertension and crying behavior." Other studies with premature babies have found that if they are touched, rocked or cuddled daily during their stay in the nursery, they have fewer nonbreathing (apneic) periods, enjoy an increased weight gain, higher IQ and advances in central nervous system functioning.

Some scientists believe that touch deprivation in babies may predispose them later toward violence. One neuropsychologist, James Prescott, formerly with the National Institute of Child Health and Human Development of the U.S. Department of Health, Education and Welfare, made the statement that "the principal cause of human violence is a lack of bodily pleasure derived from touching and stroking during the formative periods of life." Studying 49 societies from past and present, Prescott found "strong support linking physical violence in a person's adult life to lack of physical affection when he was a child." He concludes: "Those cultures that give a great deal of infant physical affection - a lot of touching, holding and carrying- were rated low in adult physical violence." While this may seem somewhat simplistic in its analysis of a complexity of factors in psychosocial family dynamics, it is likely to be an important underlying ingredient in dysfunctional and potentially violent individuals.

For infants who have an innate hunger for touch it is apparent that loving, caring touch through being cuddled, caressed, held and rocked, gently and consistently, brings them a sense of security and comfort. These are the

reassuring basic experiences the infant must enjoy if it is to thrive. Those infants who are undernourished of these pleasurable touch nutrients may experience depression, frustration, anger and distrust because people have not proved trustworthy to fulfill those essential needs. These early tactual bonds we establish with our parents can have long term consequences in terms of our sense of self and our relationships with our parents and others. Even animal studies, such as the well-known Harlow monkeys, showed that, deprived of their mother's bodily comfort, baby monkeys grew up to be irritable, aggressive, snarling and violent. As a culture dealing with an ever increasing rate of violence, particularly among teenagers, we cannot fail to ignore the implications of the importance of loving touch.

While much of the focus has thus far been on the significance of touch in early childhood growth and development, its important to note that the child within each of us continues to yearn for the comfort and reassurance that caring touch can bring throughout life. Touch is an important part of the healing process at any age.

### **Touch and the Healing Process**

Touch has been shown to be a significant factor in healing for both body and mind. One study that validated the theory that touch speeds recuperation rate was done at Grant Hospital in Columbus, Ohio. In the study, twenty patients were touched and twenty others were not touched. The results showed there was a "vast reduction" in the incidence of "complaining, angry, disgusted, uncooperative patients." Eighty-five percent of the touched patients made positive responses about the hospital and its personnel, and recuperated faster than the untouched patients."

Research has also shown that cardiac patients who had pets to hug and caress outlived those who had no pets. While there are many emotional factors that may enter in with relationships with pets, it is interesting to note that the stroking of pets was found to actually lower the patient's blood pressure.

Dolores Kreiger's research with Therapeutic Touch has shown how touch, both on and above the skin, can have powerful physiological benefits. The effect of touch she found was to stimulate the hemoglobin, that part of the blood that carries the oxygen to the tissues. By increasing oxygen to the tissues, the body is energized and can carry on the regeneration process more effectively.

Touch has also been found to be a helpful deterrent in the progress of senility. Researchers at the University of Georgia found that elderly people who received massages, frequent stroking, hugs, squeezes of the hands and arms, love pats on the cheeks and affectionate touches of their heads, showed fewer signs of senility. They were also more alert, good-humored and physically vital.

Reassuring, caring touch can go a long way in providing comfort for those that are ill or mentally distressed. It is our instinctual desire to comfort someone who is grieving by touching, holding or embracing them. It is only our learned belief system of cultural taboos that prevents us from fulfilling our natural instincts that truly enable us to show our humanness.

Fortunately we have pioneers like Dr. John F. Thie who have been dedicated to bringing caring and healing touch to the masses. Dr. Thie's intention in educating people about touch for other than punishment or sex, has given people around the world a reason and permission to have healthy touch be a part of their lives and those they love. As we in the field of Touch for Health continue to reach out and touch many people with the touch techniques we have studied and learned so well, let us not forget the subtle yet powerful healing intention that underlies the work we do, that touch, the connection with another person in an attitude of unconditional love and acceptance, goes beyond the skin alone. It fulfills a deeper need on the part of both people involved, to love and be loved in a language so basic that needs no explanation.